IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	) Group Art Unit: 2621
	)
Ikuo Tsukagoshi et al.	) Examiner: Topgyal, Gelek W
	)
Serial No.: 10/014,732	)
	)
Filed: December 11, 2001	) **APPEAL BRIEF**
	)
For: **SYSTEM AND METHOD FOR**	)
TIMESHIFTING THE	) 162 N. Wolfe Rd.
ENCODING/DECODING OF	) Sunnyvale, California 94086
AUDIO/VISUAL SIGNALS IN	) (408)530-9700
REAL-TIME	)
	) Customer No. 28960

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Sir:

In furtherance of the Applicants' Notice of Appeal filed on February 20, 2007, this Appeal Brief is submitted. This Appeal Brief is submitted in support of the Applicants' Notice of Appeal, and further pursuant to the final rejection mailed on October 20, 2006, in which Claims 1-24 were rejected. The Applicants submit this Appeal Brief to the Board of Patent Appeals and Interferences in compliance with the requirements of 37 C.F.R. § 41.37, as stated in *Rules of Practice Before the Board of Patent Appeals and Interferences (Final Rule)*, 69 Fed. Reg. 49959 (August 12, 2004). The Applicants contend that the rejections of Claims 1-24 in this proceeding are in error and are overcome by this appeal.

CERTIFICATE OF MAILING (37 CFR§ 1.8(a))
I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

HAVERSTOCK & OWENS LLP.

Date: 4/13/07 By: _____

I.   REAL PARTY IN INTEREST

As the assignees and owners of the entire right, title, and interest in the above-captioned patent application, the real parties in interest in this appeal, are:

> Sony Corporation
> 7-35 Kitashinagawa 6- Chome
> Shinagawa-Ku, Tokyo, Japan
>
> Sony Electronics Inc.
> 1 Sony Drive
> Park Ridge, New Jersey, 07656

II.   RELATED APPEALS AND INTERFERENCES

The Applicants are not aware of any other appeals or interferences related to the present application.

III.   STATUS OF THE CLAIMS

Claims 1, 3-5, 9-12, 14-16 and 20-24 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,411,771 to Aotake (hereinafter, Aotake, a copy of which is attached as Exhibit A). Claims 2 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of U.S. Patent No. 5,270,829 to Yang (hereinafter, Yang, a copy of which is attached as Exhibit B). Claims 6 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of U.S. Patent No. 6,148,135 to Suzuki (hereinafter, Suzuki, a copy of which is attached as Exhibit C). Claim 7, 8, 18 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of U.S. Patent No. 5,445,684 to Fujinami (hereinafter, Fujinami, a copy of which is attached as Exhibit D). Within this Appeal Brief, the rejections of Claims 1-24 are appealed.

IV. STATUS OF THE AMENDMENTS FILED AFTER FINAL REJECTION

Claims 1, 12, 23 and 24 were amended by appellants the Response to the Final Office Action sent December 20, 2006. As stated in the Advisory Action sent February 8, 2007, the amendments were not entered by the Examiner because they raise new issues that would require further consideration and/or search, and they are deemed not to place the application in better form for appeal by materially reducing or simplifying the issues for appeal. Therefore, the claims on appeal will revert to their form as filed on July 18, 2006 in the Amendment and Response to the Office Action mailed May 17, 2006

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention disclosed in the present application number 10/014,732 is directed to a system and method for timeshifting the encoding and decoding of a compressed audio/video bitstream. The compressed audio/video bitstream is encoded and stored. After a period of time, the encoded bitstream is retrieved and decoded. [Present Specification, Paragraph 0018] The software-based timeshifting system includes two main components, an encoder and a decoder. The timeshifting system receives an analog or digital signal at a signal input. The analog signals are received and encoded by an encoder system and are then stored in storage or a transmission medium. The encoded signals are transferred to a decoder system. Then, decoder signals are transferred to video and audio output. The timeshifting system accepts a variety of different input signal formats, including but not limited to, MPEG-2, MPEG-4 and digital video. [Present Specification, Paragraph 28 and the accompanying Figure 1b] Furthermore, the timeshifting system is able to perform timeshifting using a variety of different coding schemes and system formats which include, but are not limited to MPEG-2, MPEG-4, digital video, JPEG and Motion JPEG-2000. [Present Specification, Paragraph 52]

The elements of independent Claim 1, directed to a method of one embodiment of the present invention, are described in the Specification at paragraphs 53-60 and the accompanying Figure 7. The method of Claim 1 comprises encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes (705), storing the encoded bitstream (710), retrieving the encoded bitstream after a period of time (715) and decoding the retrieved bitstream. [Present Specification, paragraphs 53-60, Figure 7]

The elements of independent Claim 12, directed to a system of one embodiment of the present invention, are described in the Specification at paragraphs 30-33, 34 and 35, and the accompanying Figures 2, 3 and 4. The system of Claim 12 comprises an encoder for encoding a

compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes [Present Specification, paragraphs 30-33, Figure 2], a storage medium for storing the encoded bitstream [Present Specification, paragraph 34, Figure 3] and a decoder for retrieving the encoded bitstream after a period of time and decoding the retrieved bitstream. [Present Specification, paragraph 35, figure 4]

The elements of independent Claim 23, directed to a system of one embodiment of the present invention, are described in the Specification at paragraphs 30-33, 34 and 35, and the accompanying Figures 2, 3 and 4. The system of Claim 23 comprises means for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes [Present Specification, paragraphs 30-33, Figure 2], means for storing the encoded bitstream [Present Specification, paragraph 34, Figure 3], means for retrieving the encoded bitstream after a period of time and means for decoding the retrieved bitstream. [Present Specification, paragraph 35, figure 4]

The elements of independent Claim 24, directed to a computer readable medium of one embodiment of the present invention, are described in the Specification in paragraphs 22-28 and the accompanying Figure 1b. The system of Claim 24 comprises means for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes (165), means for storing the encoded bitstream (160), means for retrieving the encoded bitstream after a period of time and means for decoding the retrieved bitstream (170). [Present Specification, paragraphs 22-28, Figure 1b]

VI.   **GROUNDS OF REJECTION AND OTHER MATTERS TO BE REVIEWED ON APPEAL**

The following issues are presented in this Appeal Brief for review by the Board of Patent Appeals and Interferences:

1.   Whether Claims 1, 3-5, 9-12, 14-16 and 20-24 are properly rejected under 35 U.S.C. § 102(e) as being anticipated by Aotake.

2.   Whether Claims 2 and 13 are properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of Yang.

3.   Whether Claims 6 and 17 are properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of Suzuki.

4.   Whether Claims 7,8, 18 and 19 are properly rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of Fujinami.

VII.   ARGUMENT

Grounds for Rejection

Within the Office Action of October 20, 2006, Claims 1, 3-5, 9-12, 14-16 and 20-24 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Aotake.

Outline of Arguments

In the discussion that follows, the Applicants first discuss the teachings of Aotake. The Applicants then analyze the pending claims and their limitations and explain why Aotake does not teach the claimed invention.

1.   Aotake does not teach a coding scheme for encoding which is selected from a variety of coding schemes.

Aotake teaches a picture processing apparatus. An MPEG1 real time encoder board generates index data as an evaluation value representing the complexity of a picture. A scene change parameter representing the degree of a scene change occurring in the picture is then calculated from the index data. The scene change parameter is associated with a scene change pointer. The scene change parameter and the scene change pointer are recorded as an index in an index file. An MPEG system stream output by the MPEG1 real time encoder board is stored in an MPEG file separated from the index file. [Aotake, Abstract] Aotake also teaches utilizing a personal computer with an embedded MPEG1 real-time encoder board. The personal computer uses application programs for editing, recording, reproduction in addition to MPEG decoding of pictures and other picture processing. [Aotake, col. 8, lines 20-26] However, Aotake does not teach a coding scheme for encoding which is selected from a variety of coding schemes.

2.   The claims distinguish over Aotake.

The claims are grouped separately below to indicate that they do not stand or fall together.

a.   <u>Claims 1, 3-5 and 9-11</u>

The independent Claim 1 is directed to a method. The method of Claim 1 comprises encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes, storing the encoded bitstream, retrieving the encoded bitstream after a period of time and decoding the retrieved bitstream. As described above, Aotake does not teach a coding scheme for encoding which is selected from a variety of coding schemes. For at least these reasons, the independent Claim 1 is allowable over the teachings of Aotake.

Claims 3-5 and 9-11 are dependent upon the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Aotake. Accordingly, Claims 3-5 and 9-11 are all also allowable as being dependent upon an allowable base claim.

b.   <u>Claims 12, 14-16 and 20-22</u>

The independent Claim 12 is directed to a system. The system of Claim 12 comprises an encoder for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes, a storage medium for storing the encoded bitstream and a decoder for retrieving the encoded bitstream after a period of time and decoding the retrieved bitstream. As described above, Aotake does not teach a coding scheme for encoding which is selected from a variety of coding schemes. For at least these reasons, the independent Claim 12 is allowable over the teachings of Aotake.

Claims 14-16 and 20-22 are dependent upon the independent Claim 12. As discussed above, the independent Claim 12 is allowable over the teachings of Aotake. Accordingly, Claims 14-16 and 20-22 are all also allowable as being dependent upon an allowable base claim.

c.   <u>Claim 23</u>

The independent Claim 23 is directed to a system. The system of Claim 23 comprises means for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes, means for storing the encoded bitstream, means for retrieving the encoded bitstream after a period of time and means for decoding the retrieved bitstream. As described above, Aotake does not teach a coding scheme for encoding which is selected from a

variety of coding schemes. For at least these reasons, the independent Claim 23 is allowable over the teachings of Aotake.

d.   Claim 24

The independent Claim 24 is directed to a computer readable medium comprising instructions, which when executed on a processor, perform a method for timeshifting the encoding and decoding of a bitstream. The system of Claim 24 comprises means for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes, means for storing the encoded bitstream, means for retrieving the encoded bitstream after a period of time and means for decoding the retrieved bitstream. As described above, Aotake does not teach a coding scheme for encoding which is selected from a variety of coding schemes. For at least these reasons, the independent Claim 24 is allowable over the teachings of Aotake.

Grounds for Rejection

Within the Office Action of October 20, 2006, Claims 2 and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of Yang. Applicants respectfully disagree.

Arguments

Claim 2 is dependent upon the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Aotake. Accordingly, Claim 2 is also allowable as being dependent upon an allowable base claim.

Claim 13 is dependent upon the independent Claim 12. As discussed above, the independent Claim 12 is allowable over the teachings of Aotake. Accordingly, Claim 13 is also allowable as being dependent upon an allowable base claim.

Grounds for Rejection

Within the Office Action of October 20, 2006, Claims 6 and 17 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of Suzuki. Applicants respectfully disagree.

Arguments

Claim 6 is dependent upon the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Aotake. Accordingly, Claim 6 is also allowable as being dependent upon an allowable base claim.

Claim 17 is dependent upon the independent Claim 12. As discussed above, the independent Claim 12 is allowable over the teachings of Aotake. Accordingly, Claim 17 is also allowable as being dependent upon an allowable base claim.

Grounds for Rejection

Within the Office Action of October 20, 2006, Claims 7, 8, 18 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aotake in view of Fujinami. Applicants respectfully disagree.

Arguments

Claims 7 and 8 are dependent upon the independent Claim 1. As discussed above, the independent Claim 1 is allowable over the teachings of Aotake. Accordingly, Claims 7 and 8 are both also allowable as being dependent upon an allowable base claim.
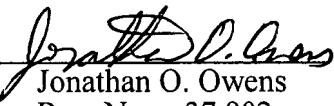
Claims 18 and 19 are dependent upon the independent Claim 12. As discussed above, the independent Claim 12 is allowable over the teachings of Aotake. Accordingly, Claims 18 and 19 are both also allowable as being dependent upon an allowable base claim.

3.   CONCLUSION

For the above reasons, it is respectfully submitted that the Claims 1-24 are allowable over the cited prior art references. Therefore, a favorable indication is respectfully requested.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated:___April 13, 2007___   By:_____
                                 Jonathan O. Owens
                                 Reg. No.: 37,902
                                 Attorneys for Applicants

VIII. CLAIMS APPENDIX

This appendix includes a list of the claims under appeal.

1. A method comprising:
   encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes;
   storing the encoded bitstream;
   retrieving the encoded bitstream after a period of time; and
   decoding the retrieved bitstream.

2. The method of claim 1 wherein the period of time is programmable.

3. The method of claim 1 wherein the period of time depends upon the quality of the bit rate of encoding.

4. The method of claim 1 wherein the period of time depends upon the complexity of the encoded image.

5. The method of claim 1 wherein the compressed bitstream comprises audio data, video data, and audio and video data.

6. The method of claim 1 wherein encoding further comprises maintaining two independent time bases for audio and video input.

7. The method of claim 1 wherein encoding further comprises:
   encoding an input video stream for a set period of time to generate an encoded video bitstream;
   encoding an input audio stream for a set period of time to generate an encoded audio bitstream; and
   multiplexing the encoded video bitstream and encoded audio bitstream to generate the compressed bitstream.

8. The method of claim 1 wherein decoding further comprises:

   demultiplexing the compressed bitstream into a demultiplexed video stream and a demultiplexed audio stream;

   decoding the demultiplexed video stream into an output video stream; and

   decoding the demultiplexed audio stream into an output audio stream.

9. The method of claim 1 wherein retrieving the encoded bitstream beginning at an access unit pointer.

10. The method of claim 9 further comprising:

    setting the position of the access unit pointer via a system start-up parameter.

11. The method of claim 9 wherein a position of the access unit pointer defines a specified time delay.

12. A system comprising:

    an encoder for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes;

    a storage medium for storing the encoded bitstream; and

    a decoder for retrieving the encoded bitstream after a period of time and decoding the retrieved bitstream.

13. The system of claim 12 wherein the period of time is programmable.

14. The system of claim 12 wherein the period of time depends upon the quality of the bit rate of encoding.

15. The system of claim 12 wherein the period of time depends upon the complexity of the encoded image.

16. The system of claim 12 wherein the compressed bitstream comprises audio data, video data, and audio and video data.

17. The system of claim 12 wherein the encoder further maintains two independent time bases for audio and video input.

18. The system of claim 12 wherein the encoder further encodes an input video stream for a set period of time to generate an encoded video bitstream, encodes an input audio stream for a set period of time to generate an encoded audio bitstream, and multiplexes the encoded video bitstream and encoded audio bitstream to generate the compressed bitstream.

19. The system of claim 12 wherein the decoder further demultiplexes the compressed bitstream into a demultiplexed video stream and a demultiplexed audio stream, decodes the demultiplexed video stream into an output video stream, and decodes the demultiplexed audio stream into an output audio stream.

20. The system of claim 12 wherein the decoder retrieves the encoded bitstream beginning at an access unit pointer.

21. The system of claim 20 wherein a background thread sets the position of the access unit pointer via a system start-up parameter.

22. The system of claim 20 wherein a position of the access unit pointer defines a specified time delay.

23. A system comprising:
   means for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes;
   means for storing the encoded bitstream;
   means for retrieving the encoded bitstream after a period of time; and
   means for decoding the retrieved bitstream.

24. A computer readable medium comprising instructions, which when executed on a processor, perform a method for timeshifting the encoding and decoding of a bitstream, the system comprising:

means for encoding a compressed domain bitstream utilizing a coding scheme selected from a variety of coding schemes;

means for storing the encoded bitstream;

means for retrieving the encoded bitstream after a period of time; and

means for decoding the retrieved bitstream.

IX. EVIDENCE APPENDIX

STATEMENT

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), the following is a statement setting forth where in the record the evidence of this appendix was entered by the examiner:

Evidence Description:	Where Entered:
U.S. Pat. No. 6,411,771	Office Action mailed May 17, 2006
U.S. Pat. No. 5,270,829	Office Action mailed May 17, 2006
U.S. Pat. No. 6,148,135	Office Action mailed May 17, 2006
U.S. Pat. No. 5,445,684	Office Action mailed May 17, 2006
Office Action mailed October 20, 2006	Examiner Office Action

X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.